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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/009,316      | 05/02/2002  | Uwe Bornscheuer      | C 2178 PCT/US       | 6946             |

23657 7590 06/08/2004

COGNIS CORPORATION  
PATENT DEPARTMENT  
300 BROOKSIDE AVENUE  
AMBLER, PA 19002

EXAMINER

LILLING, HERBERT J

| ART UNIT | PAPER NUMBER |
|----------|--------------|
|----------|--------------|

1651

DATE MAILED: 06/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                                      |   |  |
|------------------------------|--------------------------------------|---|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/009,316 | <b>Applicant(s)</b><br>BORNSCHEUER ET AL. |  |
|                              | <b>Examiner</b><br>HERBERT J LILLING | <b>Art Unit</b><br>1651                   |  |

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 18 May 2004 and 02 May 2002.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 14-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 14-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>05-02-2002</u> . | 6) <input type="checkbox"/> Other: _____  |

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1. Receipt is acknowledged of the election response filed May 18, 2004.
2. Claims 14-26 remain pending in this application.  
Claims 1-13 were previously canceled.
3. Application has elected with traverse species ascorbic acid and palmitic acid.

The election of species is proper as stated in the previous office action. Applicant has been informed in the previous office action an appropriate action to remove the election of species, which is not a restriction. The burden is on the applicant to show why the two different species are obvious over each other since they are obviously different.

The election of species has been made Final.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 16-25 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claims are dependent upon a canceled claim.

No further action has been made on these claims.

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5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 14-15 are rejected under 35 U.S.C. 102(b) as anticipated by Enomoto et al U.S. 5,079,153 or, in the alternative, under 35 U.S.C. 103(a) for Claims 14-15 and 26 as obvious over Enomoto et al U.S. 5,079,153 further in view of Masler U.S. 4,404,309; Uhrig et al U.S. 5,420, 315 or Schneider et al U.S. 5,508,182.

Enomoto et al is considered to clearly anticipate the claimed inventions for the preparation of an ester derivative of ascorbic acid, see column 2 and examples which is employed in the presence of an organic solvent [the amount of water is negligible and is not excluded by the claims] and a hydrolase.

Enomoto et al does not disclose the last step of claim 26 in which the alcohol formed in the reaction is removed by azeotropic distillation.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

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Enomoto et al teaches in column 3, lines 37-40, that "the reaction mixture can be performed conventionally".

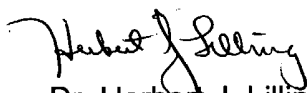
Secondary references, Masler U.S. 4,404,309; Uhrig et al U.S. 5,420, 315 and Schneider et al U.S. 5,508,182 teach that the esterification reaction forming alcohol is removed by azeotropic distillation.

It would have been prima facie obvious to one of ordinary skilled in the art to employ the conventional processes of the secondary references to remove the alcohol by azeotropic distillation for the separation of the reaction mixture absent unexpected or unobvious results. The instant specification does not demonstrate unexpected or unobvious results which disclosure is at page 6, lines 15-17 of the specification.

6. **No claim is allowed.**

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Examiner Lilling whose telephone number is 571-272-0918** and **Fax Number** is (703) 872-9306 or SPE Michael Wityshyn whose telephone number is 571-272-0926. Examiner can be reached Monday-Thursday from about 5:30 A.M. to about 3:00 P.M. Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0196.

H.J.Lilling: HJL  
(703) 308-2034  
Art Unit **1651**  
June 7, 2004

  
Dr. Herbert J. Lilling  
Primary Examiner  
Group 1600 Art Unit 1651